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A family of ferns new to the United States.¹

WILLIAM R. MAXON

The present note relates to the occurrence of *Dicranopteris flexuosa* (Schrad.) Underw., a member of the family Gleicheniaceae, in the extreme southwestern part of Alabama, as a native inhabitant of that region. A specimen which is perfectly typical of this species was sent to me for identification by Mr. L. H. McNeill, Mobile, Alabama, who wrote that it was "found growing in the 'pine flats', in the south part of Mobile County, in a shallow cut through yellow clay, on the Mobile & Bay Shore R. R. (Alabama Port Extension), about one and one-half miles east of Delchamps Station and across Fowl River." He added, "This plant, the only one I found, was growing in a niche in the perpendicular side of a shallow railroad cut * * and formed a tuft large enough to fill a bushel basket. It grew on the north (the sunny) side of the cut. * * * The road has been built but a few years and, with the exception of rails, no foreign material was used in its construction and practically no foreign material has been carried into that neighborhood."

Mr. McNeill, who has devoted much time to a study of the ferns of southern Alabama, was at pains to include these unusually complete data on account of his inability to associate the plant with the description of any species known from the southern states and also, apparently, because of the fact that it might conceivably be regarded as an introduction. The chances of its having been introduced by man are, however, very remote. Species of Gleicheniaceae are not in general cultivation, being rather rare even in the conservatories of large botanical institutions; and they are not, as a rule, sufficiently

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fine or graceful to attract the interest of fern growers. There can be no doubt that this fern was native where collected. We have thus a species, genus, and family added to the known flora of the United States.

In response to my request for further information, Mr. McNeill wrote again (July 5, 1913) as follows:

"The date upon which I found the plant was June 15, 1913. It was found on 'Mon Louis Island', which is a piece of land some twenty-five square miles in extent, separated from the mainland by Fowl River, a bayou connecting Mobile Bay and Mississippi Sound. It is 'pine barren' country, traversed by numerous 'gum branches' (small fresh-water streams fed by springs, and usually dry in mid-summer), the south end being deeply indented with areas of salt marsh. It is clay formation and will hardly average more than twenty feet above mean low water."

Dicranopteris flexuosa was originally described from Brazil and has been found to have a wide distribution in tropical America. It is common in the Greater Antilles but less so in the Lesser Antilles. On the continent it has heretofore been known to extend from southern Mexico to Brazil and to occur mainly at low elevations, ascending rarely to 1,500 meters altitude. As to the source of the Alabama specimens it may safely be surmised that they arose from wind-blown spores from Cuba, a hypothesis which explains reasonably the similar occurrence of the many West Indian fern species discovered in peninsular Florida within recent years. It is Mr. McNeill's intention to make a search for additional stations of *D. flexuosa* and it will not be very surprising if he is successful not only in this but in finding also *Blechnum occidentale* and other ubiquitous lowland species not now known to occur in the United States.

It may be mentioned, in passing, that all our American representatives of the family Gleicheniaceae fall under

the genus *Dicranopteris*; *Gleichenia* itself is exclusively an Old World genus, a fact recognized long ago by Sturm, the capable monographer of this group. But in *Dicranopteris*, as regarded at present, there are many radically diverse types as to systems of branching, and marked differences also in soriation and in scale structure; so that it is at least worthy of consideration whether *Dicranopteris* itself ought not to be subdivided into two or more genera, the characters of which would indeed be quite as good as those regarded as distinctive for genera in many other groups. The writer has elsewhere¹ called attention to the need of a critical study of this family.

The synonymy of the single species now reported from Alabama is as follows:

DICRANOPTERIS FLEXUOSA (Schrad.) Underw. Bull Torrey Club **34**: 254. 1907.

Mertensia flexuosa Schrad. Goett. Gel. Anz. **1824**: 863. 1824.

Mertensia rigida Kunze, Linnaea **9**: 16. 1834.

Gleichenia flexuosa Mett. Ann. Lugd. Bat. **1**: 50. 1863.

Gleichenia rigida Bommer & Christ, Bull. Soc. Bot. Belg. **35**: 174. 1896. Not *G. rigida* J. Smith, 1841.

Mr. McNeill's specimen is in the U. S. National Herbarium, being sheet No. 692160.

Some Ferns of Korea

D. F. HIGGINS.

The interests of the American Fern Society may not extend beyond the limits of the United States or of North America, but the writer is risking the sending in of this little preliminary statement in regard to the

¹ Contr. U. S. Nat. Herb. **16**: 52-54. 1912.